

Isc N-Channel MOSFET Transistor

IRF520NS

• FEATURES

- With To-263(D2PAK) package
- Low input capacitance and gate charge
- Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

- Switching applications



• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	100	V
V _{GSS}	Gate-Source Voltage	±20	V
I _D	Drain Current-Continuous T _c =25°C T _c =100°C	9.7 6.8	A
I _{DM}	Drain Current-Single Pulsed	38	A
P _D	Total Dissipation @T _c =25°C	48	W
T _{ch}	Max. Operating Junction Temperature	175	°C
T _{stg}	Storage Temperature	-55~175	°C



DIM	mm	
	MIN	MAX
A	10	
B	6.6	6.8
C	15.23	15.25
D	10.15	10.17
F	0.76	0.78
G	1.26	1.28
H	1.4	1.6
J	1.33	1.35
K	0.4	0.6
L	4.6	4.8
Q	8.69	8.71
R	5.28	5.30
S	1.26	1.28
U	0.0	0.2
V	0.37	0.39
W	2.80	2.82

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th(ch-c)}	Channel-to-case thermal resistance	3.1	°C/W
R _{th(ch-a)}	Channel-to-ambient thermal resistance	40	°C/W

Isc N-Channel MOSFET Transistor**IRF520NS****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=0.25mA$	100			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.25mA$	1.0		2.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=5.7A$			200	$m\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			± 0.1	μA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=100V; V_{GS}=0V; T_j=25^{\circ}\text{C}$ $V_{DS}=80V; V_{GS}=0V; T_j=125^{\circ}\text{C}$			25 250	μA
V_{SDF}	Diode forward voltage	$I_{SD}=5.7A, V_{GS}=0V$			1.3	V

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